

MEMORANDUM

TO: Governing Board Members

FROM: Kenneth G. Ammon, P.E., Deputy Executive Director *KS For KGA*
Everglades Restoration Resource Area

DATE: April 7, 2009

SUBJECT: Lake Trafford Critical Restoration Project Phase III Dredging Project -- Contract Number 4600001777

Background:

Over time, nutrient runoff from nearby agriculture and urban development shifted Lake Trafford's native aquatic vegetation to dense mats of exotic hydrilla. Herbicides were used to control the hydrilla, and dead plant material accumulated on the bottom of the lake, releasing additional nutrients. This triggered algae blooms, degrading prime spawning habitat for native fish. The blooms also reduced the lake's dissolved oxygen levels, resulting periodically in fish kills, which elucidated the need to restore the lake by dredging the muck.

Phase I dredging of Lake Trafford began in 2004 and focused on the center of the lake. It was completed in 2006. Phase II dredging was to remove the muck in the near shore area of the lake. However, due to a drought in 2007, the Phase II dredging effort was canceled.

Phase III dredging of Lake Trafford was planned to continue the Phase II dredging of the littoral zone. However, muck surveys conducted in December 2008 and January 2009 discovered that the muck had shifted into the center of the lake. With this information, the Phase III dredging to be performed under this contract will cover the center and near shore areas in the north of the lake to complete the muck removal.

This project has received all the required environmental permits from the Florida Department of Environmental Protection, the U.S. Army Corp of Engineers, and the Florida Fish and Wildlife Conservation Commission.

How this helps meet the District's 10-year Strategic Plan:

The Lake Trafford Phase III Dredging Project is a component of the Everglades Restoration Plan and is included in the 10-year strategic plan and the FY09 Annual Work Plan. This project will provide for restoration of water quality within Lake Trafford.

Funding Source:

This is a 660-day contract with Harry Pepper & Associates, Inc., the lowest responsive and responsible bidder, for the Lake Trafford Critical Restoration Project Phase III dredging project in the amount of \$7,461,664 of which dedicated funds (Big Cypress Basin Capital Projects Fund) in the amount of \$2,000,000 are budgeted and the remainder is subject to Governing Board approval of the FY10 and FY11 budgets.

This Board item impacts what areas of the District, both resource areas and geography:

Lake Trafford, located in Collier County, is within the Big Cypress Basin Service Center and Big Cypress Basin Field Station service area. Staff from the Everglades Restoration Resource Area will manage this project.

What concerns could this Board item raise?

The dredging return effluent from the Confined Disposal Facility may present water quality concerns (pollutants/metals) during the dredging process. An owner-directed allowance in the amount of \$250,000 has been specified in the contract to address any water quality concerns that may arise.

Why should the Governing Board approve this item?

There are still approximately 2.0 million cubic yards of organic sediment remaining at the bottom of the lake. This accumulated sediment contains a high level of phosphorous and will continue to cause low dissolved oxygen levels in the lake. The water quality in the lake will be impacted adversely. Therefore, the contract must be approved to begin the dredging and achieve the goals of the Strategic Plan.

Attachments – Resolution, Maps
KGA/tpv